

## **Special Effects Generator - excerpt from the Experimental Television Center Studio System Manual 1980**

An SEG is a multi-input signal processor, usually incorporating different types of processes such as mixing, keying, wiping and switching. The Panasonic SEG in the system allows you to choose one of these techniques to combine two of its inputs at a time.

Three separate main inputs and an external key input can be selected at the matrix. The 3 main inputs are split and routed into 3 separate buses, A and B and a preview bus. Most of the operations allow a transition between A and B. The same inputs can be used on either bus. Vertical interval switching is used on images within a bus.

The transitions are Mix, Wipe, Int and Ext pushbutton controls.

### **MIX**

The SEG additively mixes the outputs of A and B. The bar manually controls the gains of the 2 bus outputs. It separates into two individually controlled levers to control the gains. When used together the bar will increase and decrease the gain of the 2 bus outputs proportionately. A vertical motion of the bar results in a crossfade.

### **WIPE**

A split-screen is used to divide the outputs of A and B. There are 6 selections for shapes to divide the screen: vertical, horizontal and corner inserts. When separated, the bar can individually control horizontal and vertical positions in a corner insert. Together they will wipe from A to B.

**INT** In the Int Key mode, the SEG acts like a two-input keyer. The output of B is the clip signal. There is no key reverse.

**EXT** In the Ext Key mode, the SEG acts like a 3 input keyer. Whatever signal is input to the Ext Key input on the matrix is the clip signal between the output of bus A and bus B.

In both key modes the bar is not active.

The third or preview bus has the same choice of inputs as bus A and B. When using Cut, the SEG will switch from composite out of bus A and B to the output of the preview bus.

When the SUP button is depressed, any signal patched into this input on the back panel of the SEG will be mixed with the composite output from the SEG. This is usually pre-patched so that the program out of the Character Generator is sent to it, to allow superimposition of text and image.

On each bus, color bars and black are provided on inputs 5 and 6 respectively.

Because the SEG contains the sync generator, signals sent to the genlock input are automatically accessed at input 4 of each bus, and on the matrix.

If signals are patched to inputs 4 and 6 on the back panel of the SEG, these input signals will override the genlock and black inputs respectively to the buses. If a signal is patched to input 5 of the SEG, a switch on the front panel below pushbutton 5 on the preview bus will switch between color bars and that incoming video signal, when 5 is selected on a bus.

The output to the SEG is sent to 2 separate points in the system, one in the matrix and one to the patch panel. Usually the signal is routed at the matrix. An output is also provided at the patch panel.

- To send color bars directly to the monitors and VTR without phase alteration from the output amp
- To use one of the color monitors as a preview monitor
- To use as an alternate output amp, using the SEG as the final destination on the matrix and bypassing the Jones output amp.